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[15]

EXTERNAL EXAMINATION SEM—6

SUB CODE: US06DPHY27

DATE: 29/06/22 SUBJECT: PHYSICS TIME: 10 to 12

Q.1 MULTIPLE CHOICE QUATIONS (8)

1. ----------is the transmission of binary or digital information form one point to other

(a) data communication (b) analog (c) digital (d) modem

2. Binary pulses are represented by _____

(a) current signal (b) power signal (c) voltage level (d) current level

3. Conversion of binary signals into analog signal is known as----------

(a)modulation (b)demodulation (c)comunication (d)none

4. Bandwidth of telephone network is essentially restricted to----------

(a)1 khz (b) 2 khz (c) 3khz (d) 4 khz

5. For AM signal, if V_{max} is 80 and V_{min} is 20 V then value of modulation index "m" in percentage is ___.

(a) 60 % (b)20 % (c) 40% (d) 80 %

6. In ideal condition of AM, the modulating signal voltage $V_m$must be ____ the carrier voltage V_c

(a) Greater than (b) equal (c) less than (d) none

7. A device whose capacitance is deliberately made to be a function of applied voltage is ____.

(a) UJT (b) LDR (c) Varactor (d) LED

8. The simultaneous two way communication is called _____ .

(a) simplex (b)half duplex (c)Full duplex(d)double communication

Q.2 DO AS DIRECTED (6)

1. The telephone line carry only----------
2. Give the full name of LAN
3. Which oscillator are used in FSK modulator
4. The information signal is called_____
5. Write the equation of modulating index " m "
6. Write the full form of VVC

P.T.O.

Q.3 GIVE THE ANSWER IN SHORT (ANY SIX) (12)

1.What is modem? Explain.

2.Explain concepts of satellite.

3.Draw general diagram of FSK modem.

4.Explain wide area network

5. Mention any two benefits of using single sideband (SSB) signal.

6. Distinguish between half duplex and full duplex

7. Explain in brief simplex communication with exaples

8 Why we use carrier wave in electronic communications ?

Q.4 LONG QUATIONS (WRITE ANY FOUR) (24)

1. Give the name of different kind of networks. Explain star and bus network.

2. Which are the internet applications? Explain any three.

3. Explain concepts of WWW addresses and ISP.

4. Explain orbit shape of satellite.

5. Draw the block diagram of any communication system and explain the function of each of its elements.

6. What is modulation? Explain amplitude modulation principles, modulation index and percentage of modulation

7. Write the benefits of FM over AM and explain noise immunity.

8. Explain the use of voltage variable capacitor (varactor diode) to achieve frequency modulation (FM).